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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,411	01/30/2002	Koichiro Kawaguchi	01272.020504	4733

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT PAPER NUMBER

2854

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,411

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Dan Colilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2002 and 23 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 11, 12A and 12B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: **905** (as mentioned on page 21, line 19 of the specification). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “**906**” has been used to designate both the “transport sheet” step and the “perform scanning” step on the right side of Figure 1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: **907** (as shown in Figure 1). A proposed drawing correction, corrected drawings, or amendment to the specification to add

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the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

On page 15, line 7, it appears that “punch” should actually be --pinch--.

Appropriate correction is required.

Claim Objections

6. Claim 4 is objected to because of the following informalities:

In claim 4, line 5, “predetermined driving means” has no proper antecedent basis in the claims.

Appropriate correction is required.

7. Claims 6 and 8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Applicant has not recited any structure in these claims, instead applicant has recited functional language of how the previously recited structure is to be used. Since these claims are directed towards an apparatus, they must be limited by reciting further structural limitations. See MPEP § 2114.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 7-8 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 7, lines 3-4, applicant recites that the pressure plate is supported by the force of a predetermined elastomer. However, no disclosure of an elastomer for supporting the pressure plate could be found in the specification.

Also in claim 7, in line 5 applicant recites that the print medium is “supported and laminated on the pressure plate.” There is no support for lamination in the specification.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, applicant recites that print medium is laminated on the pressure plate. However, this language does not appear to make sense. It does not appear that a print medium would be able to be fed through a printer if it was laminated to a supporting portion of the printer.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-2, 5-6 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al.

With respect to claim 1, Kimura et al. discloses a printing apparatus including a transporting means 17-19 and a vibrating means 1 as shown in Figure 5 of Kimura et al. with respect to the last paragraph of claim 1, applicant has not recited any further structure in this paragraph. Since the claim is an apparatus claim, the claim must be limited by reciting further structural limitations. Any functional recitations are not considered relevant to the patentability of the claim. See MPEP § 2114.

With respect to claim 2, Kimura et al. discloses a movable member 18 which moves and stops for feeding print medium 16. As shown in Figure 5 of Kimura et al., movable member 18 contacts print medium 16. The last four lines of claim 2 are a functional recitation as mentioned above in reference to the functional language of claim 1.

With respect to claim 5, Kimura et al. discloses that the vibrator 1 is part of the carriage 4 (Kimura et al., col. 3, lines 34-38).

With respect to claim 6, the carriage 4 reverses when it gets to the end of the stator 8.

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With respect to claim 15, in col. 4, lines 13-15, Kimura et al. discloses that the printer is a bubble jet type printer.

14. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kelly.

With respect to claim 1, Kelly discloses a printing apparatus including a transporting means 14 and 18 and a vibrating means, pad 44, (Kelly, col. 7, lines 30-34) that vibrates the transporting means 14 and 18.

With respect to claim 3, Kelly discloses that the transporting means is comprised of a pair of rollers 14 and 18 as shown in Figures 3-4 of Kelly that are biased against each other by springs 50. Kelly additionally discloses driving means 26 for driving roller 14.

With respect to claim 4, Kelly discloses that roller 14 is a transportation roller located upstream of the printing means (see Figure 8 of Kelly) and that the roller 14 is driven by motor 26. Furthermore, Kelly discloses that the roller 14 is a pinch roller.

15. Claims 1 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Tung et al.

To the extent that the claims can be understood, it appears that Tung et al. anticipates the claimed invention.

With respect to claim 1, Tung et al. discloses a transporting means 306 (Tung et al., col. 4, lines 27-34) and a vibrating means 110, 112, 108 as shown in Figure 2 of Tung et al.

With respect to claim 7, Tung et al. further discloses a pressure plate 102 that elastically supports the printing medium 12 by elastic springs 100 and a sheet feeding roller 106. The

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vibrating means is a pressure releasing means for pressing the pressure plate 102 downward and releasing it upward.

With respect to claim 8, since applicant has not recited any further structure in this claim, it is rejected along with its parent claim, claim 7; all the functions recited in claim 8 must be able to be carried out by the structure recited in claim 7.

16. Claims 1, 3-4 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchida.

With respect to claim 1, Uchida discloses a printing apparatus including a transportation means 4,5 and a vibrating means 19,20 as shown in Figure 1 of Uchida.

With respect to claim 3, Uchida discloses that the transporting means is comprised of rollers 4-5 and further discloses a roller urging means 5c for biasing the roller 5 against roller 4 as shown in Figure 1 of Uchida and a driving means (not shown) as mentioned on page 2, paragraph 30 of Uchida.

With respect to claim 4, the transporting means includes transportation roller 4 and a pinch roller 5, both of which are located upstream of a printing means.

With respect to claim 9, Uchida further discloses a pinch roller holder 5a and a holder moving means 19,20 which is also the vibrating means.

With respect to claim 10, applicant hasn't recited any further structure in this claim. Since Uchida meets all the structure recited in claim 9, it must also be able to carry out the steps recited in claim 10.

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17. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuhashi.

With respect to claim 16, Matsuhashi discloses a printing method which includes a transporting means 12,34 for transporting print medium T as shown in Figure 2 of Matsuhashi. The transporting means transports at least some of the medium T after a printing operation has been performed so that the lead end of the medium T is fed out of the print zone. The method further includes the step of moving a carriage to vibrate the transporting means. The step of moving the carriage can occur before the step of printing in order to detect the width of the recording medium (Matsuhashi, col. 11, lines 64-67)

With respect to claims 17-18, Matsuhashi discloses that the transporting means includes movable rollers 12 and 34 for moving and stopping the print medium T. These rollers are held in a stable stopped position when the printhead 5 scans across the print medium. The roller 34 is biased against the roller 12 by spring 36.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida as applied to claims 1, 3-4 and 9-10 above, and further in view of Merz et al.

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With respect to claim 11, Uchida discloses the claimed printing apparatus except for the detection means. However, Merz et al. teaches a printing apparatus with an encoder roller 210 for feeding printing media and encoder sensor 250 for determining the angular position of roller 210. It would have been obvious to combine the teaching of Merz et al. with the printing apparatus disclosed by Uchida for the advantage of reduction of print defect due to media misregistration (Merz et al., col. 2, lines 16-19). The remainder of claim 11 beginning with “and if it is detected” is a functional recitation without the positive recitation of structure. Since this is an apparatus claim, functional recitations are not given any patentable relevance.

With respect to claim 12, Merz et al. discloses the sensor as mentioned above, additionally, the sensor would detect the position of roller 210 while it is stopped so that the printhead 200 prints a line. The remainder of claim 12 beginning with “and if it is detected” is a functional recitation without the positive recitation of structure. Since this is an apparatus claim, functional recitations are not given any patentable relevance.

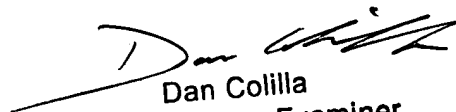
With respect to claims 13-14, the encoder sensor 250 generates pulses according to the position of the roller 210 and sends the signals to a servo motor 180 which is a counting means for counting the signals (Merz et al., col. 5, lines 6-34).

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (703) 308-2259. The examiner can normally be reached M-F, 8:30-5:30. Faxes regarding this application can be sent to (703) 746-4405.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (703)305-6619. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

April 7, 2003



Dan Colilla
Primary Examiner
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